

Remarks

This Request for Continued Examination and Response is in reply to the Final Office Action mailed June 17, 2005. A Petition for Extension of Time is submitted herewith, together with the appropriate fee. No fee is due for the addition of new claims.

Applicant acknowledges with thanks the courtesy of an interview with Examiner Barbara Burgess on July 12, 2005, during the course of which interview the parties discussed generally the language of the claims. In the present Request for Continued Examination, the claims have been amended to better clarify the meaning thereof, particularly with respect to the use of a session-based connection, or session-based protocol.

I. Summary of Examiner's Rejections

Prior to the Final Office Action mailed June 17, 2005, Claims 1-29 were pending in the Application. In the Office Action, Claims 1-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell (U.S. Publication No. 2001/0013038) in view of Schabes et al. (U.S. Publication No. 2002/0123994, hereinafter Schabes).

II. Summary of Applicant's Amendment

The present Response cancels Claims 16, 18, 19, 22, 23 and 28; amends Claims 1-5, 8, 9, 11-15, 20, 21, 24, and 29; and adds new Claims 30-33, leaving for the Examiner's present consideration Claims 1-18, 20, 21, 24-27, 29, and 30-33. Reconsideration of the Application, as amended, is respectfully requested. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

III. Claim Rejections under 35 U.S.C. §103(a)

In the Office Action mailed June 17, 2005, Claims 1-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell (U.S. Publication No. 2001/0013038) in view of Schabes (U.S. Publication No. 2002/0123994).

Claim 1

Claim 1 has been amended by the current Response to more clearly define the embodiment therein. As amended, Claim 1 defines:

1. (Currently Amended) A system for session-based retrieval at a client system of content from a server system, comprising:

a communication protocol that enables an asynchronous session-based connection between a client system and a server system, and allows the client system to send, within a session between the client system and the server system, a plurality of consecutively input query strings, to query the server system for content;

a client object, in communication with a client software at the client system and with the communication protocol, wherein the client object transmits to a server object at the server system a plurality of consecutive queries, within the same session, to retrieve content from the server system, wherein each consecutive query one of lengthens or shortens the query string by one or more characters, and forms an increasingly focused query string for retrieving content from the server system; and

a server object, in communication with the server system, and in communication with the client object via the communication protocol, wherein the server object records, during the session, each of the plurality of consecutive queries from the client system, and in response to receiving each query as it is being lengthened or shortened by one or more characters, automatically matches the focused query string against the content of the server system, and asynchronously returns increasingly relevant content information to the client object for immediate use by the client system.

Claim 1 has been amended to more clearly define the embodiment therein as one that allows for session-based retrieval at a client of content from a server, using consecutive string-based query input within the same session. The manner in which the client system and the server system are connected by an asynchronous session-based connection has been more clearly defined to distinguish a session-based connection from the general concept of a "session" between two or more parties. Furthermore, the process wherein each subsequent one of said plurality of queries lengthens or shortens the query string by one or more characters has been more clearly defined to distinguish this technique of extending a query string search term from the extended search-pattern techniques described in the cited references.

As defined by Claim 1, as currently amended, the system comprises a communication protocol that provides an *asynchronous session-based connection* between a client and a server. As part of a session, the client can send a plurality of consecutively input strings to query the server for content. A client object transmits to a server object a plurality of consecutive queries, within the same session, to retrieve content from the server system. Each consecutive query either *lengthens*

or shortens the query string by one or more characters, to form an increasingly focused query string for retrieving content from the server system. (For example, the query string can be lengthened by an additional character). A server object records, during the *same* session, each of the plurality of queries. As the search string is being lengthened or shortened, the server object *automatically matches the focused query string* against the content of the server system, and returns *increasingly relevant* content information to the client for immediate use by the client system. Applicant respectfully submits that these features are not disclosed by the cited references.

The advantages of such a session-based protocol include that the server recognizes when subsequent requests originate at the same client. Thus, in responding to an input character the server receives from the client, the server can use the history of data that has already been sent to/from that client. Furthermore, since the system is *asynchronous*, both the client and the server can initiate communications at any moment in time. A net result of this is that, for example, as content information changes at the server, or as the server receives input from the client, the server can automatically match the extending query string, (for example, the lengthening or the shortening string), against its content, and can automatically send updated results to the client, without the client user having to click "submit". This is a very user-friendly means of searching complex server content and databases.

By way of illustration, when used in a Web-site search application, since the server monitors each query as it is lengthened or shortened by one or more characters, automatically matches the focused query string against the content of the server system, and asynchronously returns increasingly relevant content information to the client object for immediate use by the client system, while a user of a client is typing a search input into the application the server can simultaneously (because of its asynchronous properties) communicate relevant information (i.e. feedback) to the client, so that the search options presented to the user can be immediately revised. In this manner, the application suggests to the user increasingly appropriate search options based both on their current input and on the present content of the server.

In addition, since the server can operate asynchronously from the client, the server can make an intelligent decision about how to efficiently respond to many subsequent requests that originate from many sessions (for example, from many users on a network who are each currently typing search strings into an input field). In this instance, rather than returning a result for each and every character typed, the server can limit results that are returned in each session to ensure

maximum throughput, i.e. a result for a previous query need not be sent to a client if that same client has already appended another character to its query string.

Purcell discloses a technique for providing a universal query for multiple different databases, that allows a client in a client/server computing environment to query a plurality of databases for desired data utilizing a single query sent over a network one time. (Abstract). More particularly, Purcell describes a technique for creating a single query from a user's software program or application which is compatible with all of the databases accessible from the application that will query all such databases for data designated in the query from only a single sending of the query. (Page 1, paragraph [0002]).

As described in Applicant's response filed April 14, 2005, it appears from the above description that, in Purcell, the primary goal is to allow a single query from a client to be simultaneously applied against multiple databases in a network. The system disclosed therein provides that any of the multiple databases that cannot service the specific client query return an empty result (indicating for example "sorry, I can't fulfill that request"). Indeed, it appears more advantageous to have a network-wide dispersal of the queries, so as to maximize the chances that at least one of the servers can provide the desired data, rather than to have those queries contained within a single session between a single client and a single server. The system then allows another database in the network that can fulfill the request to return the requested data. As such, Applicant respectfully submits that Purcell does not disclose a *session-based* environment, wherein a communication protocol provides an *asynchronous session-based connection* between the client system and the server system, and allows the client system to send, as part of a session between that client system and that server system, a plurality of consecutively input strings to query the server system for content. Instead, Purcell appears to disclose a traditional synchronous means of requesting information, and not one that uses a session, as presently defined.

Furthermore, in the embodiment defined by Claim 1, a client is capable of transmitting to a server object a plurality of queries, within the same session, wherein *each consecutive query one of lengthens or shortens the query string by one or more characters, and forms an increasingly focused query string* for retrieving relevant content from the server system. Applicant respectfully submits that Purcell does not teach that an increasingly focused query string may be applied to a server. Purcell appears to be concerned instead with responding to a *single* query from a user's software program or application which is compatible with all of the databases accessible from the application and that will query all such databases for data designated in the query from the single

sending of the query. This is in line with Purcell's goal of allowing access to multiple non-homogenous databases utilizing a single database query sent once from the client.

Furthermore, in the embodiment defined by Claim 1, the server object records, during the session, each of said plurality of queries, and in response to receiving each query as it is being lengthened or shortened by one or more characters, *automatically matches the focused query string* against the content of the server system, and *asynchronously returns increasingly relevant content information to the client object*, for immediate use by the client system. Applicant respectfully submits that Purcell similarly does not teach that the server automatically returns increasingly relevant content information to the client object as it is being lengthened or shortened by one or more characters. Indeed, as described in Purcell, if a server does not have the desired data, then no response at all is sent by the server (i.e. received by the client).

Schabes discloses a system for fulfilling an information need using extended matching techniques. As disclosed therein, the system receives a query containing an unspecified portion. The system identifies matches for the query within a body of information. Typically the body of information comprises a body of text, which may be organized in the form of discrete documents. The system preferably identifies a plurality of matches for the query and ranks the identified matches. (Paragraph [0025]). In one embodiment an extended matching technique modifies the criteria for a match. According to the extended matching technique, in an extended match the relative order of (1) the term or group of terms in the extended match that correspond(s) to a partially unspecified term in the query and (2) the terms or term synonyms in the extended match that correspond to the fully specified terms in the query need not be preserved. (Paragraph [0135]).

Schabes is cited for the concept of refining a search, using extended matching techniques, according to the relative sequence or pattern of words in a particular input query. However, Applicant respectfully submits that Schabes does not teach the particular search and retrieval described above and defined by Claim 1, namely that the server object records, *during the same session*, each of a plurality of queries, and in response to receiving each single string character, *automatically matches the changing query string* against the content of the server system, *as it is being lengthened or shortened by one or more characters*, and *returns increasingly relevant content information to the client object, for immediate use by the client system*. Unlike Schabes, the embodiment defined by Claim 1 does not depend on the contents, format, or semantics of the query string, other than it being generally extended (lengthened, or shortened) character-by-character; the server can then analyze the lengthening or shortening query string, translate it into relevant queries

for different types of content, and immediately provide that feedback information to the client for further use by the client.

In view of the above comments, Applicant respectfully submits that Claim 1 is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 1, 20, 21, 24, and 29

The comments provided above with respect to Claim 1 are incorporated herein by reference. Claims 1, 20, 21, 24, and 29 have been similarly amended to more clearly define the embodiments therein. Applicant respectfully submits that Claims 1, 20, 21, 24, and 29 are similarly neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 2-15, 17 and 25-27

Claims 2-15, 17 and 25-27 are not addressed separately but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim and further in view of the comments provided above. Applicant respectfully submits that Claims 2-15, 17 and 25-27 are similarly neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested. It is also submitted that these claims also add their own limitations which render them patentable in their own right. Applicant respectfully reserves the right to argue these limitations should it become necessary in the future.

Claims 16, 18, 19, 22, 23 and 28

Claims 16, 18, 19, 22, 23 and 28 have been canceled, rendering moot the rejection of these claims. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

IV. Additional Amendments

Claims 30-33 have been newly added by the present Request for Continued Examination. Applicant respectfully requests that new Claims 30-33 be included in the Application and considered therewith.

V. Conclusion

In view of the above amendments and remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond up to and including December 19, 2005.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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